

ABSTRACT

The invention provides a method of increasing the reaction rate of an organic synthesis reaction by utilizing supply of  $\text{OH}^-$  from water in the absence of catalyst without adding a basic catalyst in supercritical water or subcritical water of at least 350 °C, and a method of generating alcohol and carboxylic acid with high reaction rate by performing a Cannizzaro reaction in the absence of catalyst without adding a basic catalyst in supercritical water, and to a method of synthesis of alcohol and carboxylic acid from an aldehyde in the absence of catalyst without adding a basic catalyst near the critical point (375 to 380 °C, 22.5 to 25 MPa) of supercritical water.